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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,296	11/02/2001	Subramanian Vasudevan	3-2	2491

7590 10/18/2005

Docket Administration (Room 3J-219)
Lucent Technologies Inc.
101 Crawfords Corner Road
Holmdel, NJ 07733-3030

EXAMINER	
WONG, WARNER	

ART UNIT	PAPER NUMBER
2668	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/001,296	VASUDEVAN ET AL.	
	Examiner	Art Unit	
	Warner Wong	2668	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Gitlin (6,018,528).

Regarding claims 1,10 and 19, Gitlin describes an air interface transmission (inherent of transmitting, receiving and allocating) method for CDMA/TDMA/FDMA users (mobile devices) comprising:

transmitting/receiving information over a shared wireless channel by varying a time span (total time slots to transfer entire information payload) and at least one of a bandwidth (frequency bands or code space) and a duty cycle (# of time slots for a user). See fig. 6 and 7, where # of frequency bands, code space and/or time slots are varied.

Regarding claims 2 and 11, Gitlin describes the time span and the at least one of a bandwidth and a duty cycle are varied as a function of a channel quality (BER) of a wireless receiver (col. 8, lines 42-45, "The scheduling process accounts for granting the various users codes so that the BER caused by the total level of interference from all the transmissions remains below the acceptable threshold.")

Regarding claims 3 and 12, Gitlin describes the channel quality comprises the bit error rate (BER) of a wireless link between the wireless receiver and a wireless

transmitter (col. 8, lines 42-45, "The scheduling process accounts for granting the various users codes so that the BER caused by the total level of interference from all the transmissions remains below the acceptable threshold.")

Regarding claims 4 and 13, Gitlin describes the channel quality comprises the interference from information transmitted to at least one other wireless receiver (col. 8, lines 42-45, "The scheduling process accounts for granting the various users codes so that the BER caused by the total level of interference from all the transmissions remains below the acceptable threshold.")

Regarding claims 5 and 14, Gitlin describes the step of transmitting/receiving a signal corresponding with a transmission format having a time span and at least one of a bandwidth (frequency bands or code space) and a duty cycle (time slots) to be employed for the information to be transmitted (fig. 6 and 7, where the transmission format of each user comprises certain frequency bands, code space and/or time slots).

Regarding claims 6 and 15, Gitlin describes the signal comprising a bit sequence corresponding with at least one of the varied time span (time slots) and varied bandwidth (frequency bands or code space) (col. 2, lines 22-25, "The individual time slots 24 can transmit a given number of bits for voice (n bits) or video (m bits) transmissions, using different amounts of bandwidths.")

Regarding claims 7 and 16, Gitlin describes the transmitting/receiving a signal comprises:

determining the transmission format (fig. 6 and 7, where the transmission format of each user comprises certain frequency bands, code space and/or time slots);

recalculating the bandwidth (frequency bands or code space) of the transmission format if the time span (interval of time allocated to download the entire data [payload], depending on rate of variation [i.e. channel quality] as defined on p.13 of specification) is greater than an information payload to be transmitted divided by a data rate (i.e. the anticipated interval of time **not** accounted for any channel quality variation) of the wireless receiver (col. 8, lines 52-54, "Scheduling may thus be used to efficiently pack each time slot within overall medium 40, while maintaining acceptable bit error rates.", where the scheduler dynamically recalculates the bandwidth based on varying channel quality.)

Regarding claims 8 and 17, Gitlin describes the transmitting/receiving a signal comprises:

determining the transmission format (fig. 7, where the transmission format of each user comprises certain code space and/or time slots);

recalculating the duty cycle (# of time slots for a user per a transmission window as in fig. 6 or 7; each duty cycle is a fraction of time span as per definition on p. 13 of the applicant specification & each duty cycle transmits a portion of the payload.) of the transmission format if the time span (interval of time allocated to download the entire data [payload], depending on rate of variation [i.e. channel quality] as defined on p.13 of specification) is greater than an information payload to be transmitted divided by a data rate (i.e. the anticipated interval of time **not** accounted for any channel quality variation) of the wireless receiver (col. 8, lines 52-54, "Scheduling may thus be used to efficiently pack each time slot within overall medium 40, while maintaining acceptable bit error

rates." where the scheduler dynamically recalculates the bandwidth based on varying channel quality.)

Regarding claims 9 and 18, the definitions of time span and duty cycle are interpreted by the examiner as provided in claim 1. The data rate is interpreted by the examiner as the # of time slots multiplied by # of frequency bands/code space of a user per a transmission window, which is subject to change by the scheduler (col. 8, lines 52-54). Hence, by such definition, Gitlin teaches that the duty cycle will be determined by (a function of) dividing the information payload by the product of the data rate and the time span.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Warner Wong whose telephone number is 571-272-8197. The examiner can normally be reached on 5:30AM - 2:00PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Warner Wong
Examiner
Art Unit 2668

WW

CHIEH M. FAN
PRIMARY EXAMINER